

## **REMARKS**

New claim 26 has been added, and therefore claims 14-24 and 26 are pending in the present application. Claim 25, which was withdrawn from consideration, has now been canceled. In view of the following, it is respectfully submitted that all of the presently pending claims are allowable, and reconsideration is respectfully requested.

### **I. Foreign Priority**

Applicants thank the Examiner for acknowledging the claim for foreign priority and confirming that all certified copies of the priority documents have been received.

### **II. Information Disclosure Statement**

In paragraph 4 of the Office Action, the Examiner indicated that the “listing of references in the Search Report is not considered to be an information disclosure statement.” In response, Applicants note that all references listed on the Search Report were separately listed on Form PTO-1449 for “Information Disclosure Statement by Applicant,” and therefore the Examiner’s objection is inappropriate.

To the extent the Examiner noted in paragraph 5 of the Office Action that the “information disclosure statements filed [on] 4/10/2006, 11/26/2008, and 4/23/2009 fail to comply with 37 C.F.R. 1.98(a)(2),” Applicants note that copies of all the foreign references listed on the Form PTO-1449a accompanying the supplemental IDS filed on April 23, 2009 were provided with the IDS (an English abstract of JP 2000502838 was not available, as noted in the IDS, and therefore a German equivalent document, DE 19549202, and a corresponding English abstract were provided). Similarly, for the IDS filed on 11/26/2008, English abstract of JP 55134950 was not available, as noted in the IDS, and therefore a French equivalent, FR 2 453 500, and a corresponding English abstract were provided. With respect to the IDS filed on 4/10/2006, copies of the three foreign references (DE 30 11 491; FR 2 454 699; and DE 4112 286) cited in the IDS were not provided to the USPTO because these references were also listed in the Search Report and copies of these references should have been provided by the International Searching Authority. Applicants submit that all requirements of C.F.R. 1.98 have been met, and all references cited in the 4/10/2006,

11/26/2008, and 4/23/2009 Information Disclosure Statements should be considered and made of record.

**III. Drawing Objection**

In response to the Examiner's objection to Fig. 1, Applicants have amended Fig. 1 by adding the legend "Prior Art."

**IV. Title Objection**

In paragraph 7 of the Office Action, the Examiner objected to the Title for not being descriptive. In response, the Title has been amended as "Press-fit Power Diode," as suggested by the Examiner. Withdrawal of the objection is therefore respectfully requested.

**V. Claim Objection**

In response to the Examiner's objection to claim 21 as failing to provide proper antecedent basis for the claimed subject matter, Applicants have amended claim 21 to recite that the trench has a width of approximately .1 mm which is supported by the present specification. See Substitute Specification, page 7, lines 20-23. Withdrawal of the objection is respectfully requested.

**VI. Rejection of Claims 15-24 under §112**

Claims 15-24 were rejected under U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out the subject matter of the invention. In response to the Examiner's comments, Applicants have amended the claims to address the issues raised by the Examiner, as explained below.

Claim 15 has been amended to recite that the plastic sheathing is "situated at least in an area around the chip and forms a mechanical connection between the base and the head wire." In addition, Applicants disagree with the Examiner's contention that the limitation of a plastic sheathing including a sleeve is inconsistent with the specification: the specification clearly indicates the sheathing being "made of at least one sleeve and a sub-area filled with a casting compound." See Substitute Specification, page 3, line 31 – page 4, line 1.

Claim 16 has been amended to recite that only the base is made up of at least one of an electrically conductive material and thermally conductive material. New claim 26 has been added which recites that the entire housing (which includes the base and the plastic sheathing) is made of at least one of an electrically conductive material and thermally conductive material. Claim 26 does not depend on claim 16.

Claim 17 has been amended to provide sufficient antecedent basis for the limitations of the claim. Applicants disagree with the Examiner's assertion that the limitation in claim 17 that the height of the base is between .5 mm to .8 mm is not supported by the specification. The specification clearly states that the height of the base should be selected to be at least 0.5 mm to 0.8 mm. See Substitute Specification, page 3, lines 24-27.

Claim 19 was amended to recite that the plastic sheathing is made up of an area that is filled with a casting compound. This limitation is not cited in parent claim 15. Furthermore, claim 19 was also amended to recite that the plastic sheathing is situated in an area around the chip itself. Amended claim 19 does not contain the limitation of at least one sleeve.

Claims 15 and 20 were amended to consistently use the term "trench." In view of the foregoing reasons, Applicants respectfully request that the indefiniteness rejections should be withdrawn.

#### **VII. Rejection of Claims 15 and 16 under §102**

Claims 15 and 16 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,060,776 ("Spitz"). Applicants respectfully submit that this rejection should be reversed for at least the following reasons.

In order to reject a claim under 35 U.S.C. § 102(b), the Office must demonstrate that each and every claim feature is identically described or contained in a single prior art reference. See Scripps Clinic & Research Foundation v. Genentech, Inc., 18 U.S.P.Q.2d 1001, 1010 (Fed. Cir. 1991)). Still further, not only must each of the claim features be identically described, an anticipatory reference must also enable a person having

ordinary skill in the art to practice the claimed subject matter of the claims. See Akzo, N.V. v. U.S.I.T.C., 1 U.S.P.Q.2d 1241, 1245 (Fed. Cir. 1986). To the extent that the Examiner may be relying on the doctrine of inherent disclosure, the Examiner must provide a “basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristics necessarily flow from the teachings of the applied art.” See M.P.E.P. § 2112; emphasis in original; see also Ex parte Levy, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Int'l. 1990). Thus, the M.P.E.P. and the case law make clear that simply because a certain result or characteristic may occur in the prior art does not establish the inherence of that result or characteristic. Accordingly, it is respectfully submitted that any anticipation rejection premised on the inherency doctrine is not sustainable absent the foregoing conditions.

The Spitz reference claims priority to German patent document DE 19549202, which is discussed in the “Background Information” section of the present application. The present application clearly differentiates the present invention from the Spitz reference, e.g., the present invention provides the substantial advantages of a fit-press diode that may be used in structures that have limited space for mounting height and are not deformed when press fitted. In this regard, claim 15 has been amended to recite the presence of two bevels located at the top and the bottom of the housing to allow for the diode to be press-fitted. Although the Examiner contends (in connection with the rejection of claim 17 under §103(a)) that the Spitz reference teaches chamfers, Applicants respectfully contend that the chamfers in Spitz are completely distinguishable from the present invention. In Spitz, a chamfer is discussed as bordering the semiconductor chip which is filled with solder. See Spitz, Col. 3, lines 34-35. Spitz does not contain any disclosure or suggestion that chamfers are used to help facilitate press-fitting of the diode, e.g., into the rectifier, let alone suggest that chamfers or bevels are present at the top and bottom of the housing to enable press-fitting of the diode; instead, Spitz merely discusses the presence of a single press-fit region (reference item 11). See Spitz, Col. 3, lines 24-29.

Applicants further note that Spitz does not disclose or suggest the presence of an undercut. To the extent the Examiner asserts that the presence of a shoulder in Spitz discloses the limitation of an undercut, Applicants respectfully disagree. By definition, an

undercut is a surface that contains a recess within it. However, the shoulder described in Spitz does not contain a recess; instead, the shoulder is specifically described as having an oblique edge. See Spitz, col. 3, lines 37-39. A shoulder with an oblique edge is completely distinct from an undercut and will not perform the same functionalities of an undercut. Therefore, the Spitz reference does not disclose or suggest the presence of the claimed undercut.

For the foregoing reasons, claim 15 and its dependant claim 16 are allowable over the Spitz reference. Removal of the anticipation rejection is requested.

#### **VIII. Rejection of Claims 17-24 under §103**

Claims 17-24 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Spitz. Applicants respectfully submit that this rejection should be reversed for at least the following reasons.

In order for a claim to be rejected for obviousness under 35 U.S.C. § 103(a), the prior art must teach or suggest each element of the claim. See Northern Telecom, Inc. v. Datapoint Corp., 908 F.2d 931, 934 (Fed. Cir. 1990), cert. denied, 111 S. Ct. 296 (1990); In re Bond, 910 F.2d 831, 834 (Fed. Cir. 1990). To establish a *prima facie* case of obviousness, the Examiner must show, *inter alia*, that there is some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify or combine the references, and that, when so modified or combined, the prior art teaches or suggests all of the claim limitations. M.P.E.P. §2143. In addition, as clearly indicated by the Supreme Court, it is “important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the [prior art] elements” in the manner claimed. See KSR Int’l Co. v. Teleflex, Inc., 127 S. Ct. 1727 (2007). In addition, all the teachings of the prior art must be considered, including those which teach away from the claimed invention. (See M.P.E.P. 2143.01.II). To the extent that the Examiner may be relying on the doctrine of inherent disclosure to support the obviousness rejection, the Examiner must provide a “basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristics necessarily flow from the

teachings of the applied art.” (See M.P.E.P. § 2112; emphasis in original; see also Ex parte Levy, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Inter. 1990)).

Claims 17-24 depend from claim 15, and therefore claims 17-24 are allowable for essentially the same reasons as claim 15. As stated above, Spitz does not disclose or suggest the presence of an undercut or at least two bevels located at the top and bottom of the housing present in parent claim 15. Accordingly, by virtue of dependence of claims 17-24 on claim 15, Applicants submit that claims 17-24 are not rendered obvious by Spitz, and the obviousness rejection should be withdrawn.

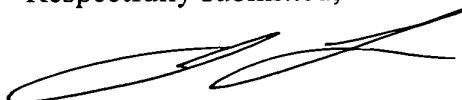
**IX. New Claim**

New claim 26 does not add any new matter and is supported by the present application. Claim 26 contains subject matter which was previously present in claim 16. Claim 26 is allowable by virtue of its dependence on claim 15.

**CONCLUSION**

In view of the above, it is respectfully submitted that all of the presently pending claims 14-24 and 26 are allowable. It is therefore respectfully requested that the rejections (and any objections) be withdrawn. All issues raised by the Examiner having been addressed, an early and favorable action on the merits is respectfully requested.

Respectfully submitted,



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